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ABSTRACT

This paper identifies and discusses components of successful magnet programs. It is based on a review of existing research literature and information gathered directly from school districts. First, the paper discusses separately the following elements, which are considered "core components": (1) leadership; (2) organizational structure; (3) program design; (4) staffing; (5) student selection; (6) resources; (7) student recruitment; (8) transportation; (9) funding; and (10) evaluation. Next, the paper describes "ancillary components," elements which add to effectiveness of the magnet school but depending on local circumstances may or may not be included. These are the following: (1) parental involvement; (2) corporate/community support; (3) inter-district participation; and (4) evaluation. A conclusion outlines the ways in which magnet schools have proved to be effective. They work to reduce violence and vandalism, and improve attendance rates, student achievement, and student self-concept and school attitude. (KH)

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COMPONENTS OF SUCCESSFUL MAGNET SCHOOLS

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COMPONENTS OF SUCCESSFUL MAGNET SCHOOLS

INTRODUCTION

Magnet schools were initiated to maintain quality integrated education and to bring about desegregation in urban school districts. Today, however, they are found in medium, small, and large school districts in urban and suburban areas including all geographical sections of the United States. The use of magnet schools as a desegregation tool has increased greatly during the past decade. These unique and innovative educational programs are also helping to transform public education. Equity and excellence in education, two major problems facing the nation's public school systems, have accelerated the expansion of the magnet school concept. School districts are asking, "How do we achieve equality as well as excellence?" The quest for a solution to school desegregation and educational excellence continues to cause more and more of the nation's school districts to consider magnet schools as an option. A 1983 national study of magnet schools, prepared by James H. Lowry and Associates (Blank, et al, 1983) indicates that between 1976-77 and 1981-82, districts implementing magnet school programs grew from 14 to 138. Since 1982 not only have the number of school districts implementing magnet school programs continued to increase but the number of magnet schools within school districts has also increased.

The attention being given the nation's public schools, as evidenced in studies regarding the state of education in America including the Secretary of Education's National Commission on Excellence in Education (1983), The Task Force on Education for Economic Growth, and recent recommendations of the nation's governors regarding public education, has certainly added impetus to the acceleration of the number of school districts implementing the concept.

Development of magnet schools has not occurred in isolation but has taken

place within a general societal context and development has been affected by changes in the society as a whole. Consideration of the magnet school concept must include a careful analysis of conditions in local communities for educational change. The following salient points should be considered:

(1) Placing magnet programs in locations that will attract all ethnic groups.

(2) Devising instructional programs that address changing educational needs.

(3) Larger societal factors affecting schools, e.g.,

- Family need and composition
- Parental perceptions
- Changes in student populations
- Teacher shortages
- Technological advances
- Community resources
- Legal mandates and judicial opinion, and

(4) Local districts issues affecting school planning:

- Raising student achievement
- Transfer policies
- Building capacity/attendance zones
- Voluntary interdistrict education plans

STUDY OBJECTIVES

This paper will identify and discuss components of successful magnet programs. A search of the literature indicates that even though researchers have described the various components of magnet school programs the effectiveness of the various components in determining the success of the program has not been a primary focus of their investigations. Most of the data in the literature is descriptive in nature. Although Blank, et al, 1983 includes some comparison, no indepth systematic, comparative analyses of magnet school components as related to success in implementing a program was found. Thus, data found in the review of the literature as well as a review of information gathered directly from school districts form the basis for this paper. Some attention

has also been given to the degree of attainment and unintended consequences of objectives of magnet schools.

For purposes of this paper, magnet schools are those meeting the criteria included in the following definition by the United States Department of Education:

> "School or education center that offers a special curriculum capable of attracting substantial numbers of students of different racial backgrounds."

Components of Magnet Schools

There are multiple components and/or variables which must be considered in implementing magnet schools. The program components vary based on locale, needs, resources, and emphasis of particular school districts. Success, however, is directly related to the effectiveness in designing, mixing, and implementing these multiple components. The components can be divided into two categories:

1. Core components--Basic elements which must be included in a magnet school for success.
2. Ancillary Components--Elements which add to effectiveness of the magnet school but depending on local circumstances may or may not be included.

CORE COMPONENTS

Several factors have been identified as necessary ingredients in successful magnet schools. These components are found consistently across districts in magnet school programs. They are the very heart of the concept. They are: (1) leadership, (2) organizational structure, (3) program design, (4) staffing, (5) student selection, (6) resources, (7) student recruitment, (8) transportation, (9) funding, (10) evaluation.

Leadership

Leadership is a necessary ingredient in the magnet school concept, and it undergirds successful implementation of a district plan as well as individual school programs. The study done by Lowry and Associates concluded that magnet

schools will not succeed unless there is strong district leadership for a magnet school policy and a plan for implementation as well as school leadership that is innovative and resourceful. Thus, the degree of success appears to be directly related to leadership, including that exhibited by school boards, superintendents, district administrators, and school leadership.

School Board. The school board establishes policies related to the objectives and finances of the schools. The school board is also responsible for advocating, locating and reviewing planning options for magnets. Because of the uniqueness of the program, flexibility in policies must be granted by school boards as well as financial resources allocated. For example, the Policies and Administrative Procedures of the Houston School District include specific policies related to admissions, transfers and withdrawals, and transportation. Staffing guidelines allow for flexible staffing based on unique program needs. The board also has provided as a part of the budgeting process, the necessary funds to accommodate the special program needs.

Superintendent. The superintendent, the CEO of the district, is responsible for overall implementation and must lend visible support to the concept and be committed to making the plan work.

District Central Office Staff. The district central office staff provide support and coordinate district-wide activities related to the magnet school program. They are involved in the development of curriculum, supervision for specialty teachers, purchasing, facility planning, personnel selection, and transportation. They must understand the uniqueness of each program and provide the support services to make the program work.

Several districts have created departments to furnish the leadership essential in the general administration of the magnet school program. This department headed by a top administrator coordinates all of the efforts related to

implementation of the program. The Assistant Superintendent for Enrichment Programs in the Houston School District is responsible for the implementation of the magnet school program. A bureau of magnet school programs in the Enrichment Department is headed by a director who has the following duties:

1. Coordinates efforts with other departments and the community to provide support services.
2. Identifies needs and recommends curriculum projects.
3. Assesses needs, plans and recommends curriculum projects.
4. Works with magnet school principals to develop objectives and visits the schools periodically to appraise the programs.
5. Communicates and interprets Court guidelines as related to magnet school programs and desegregation in the District.
6. Works with magnet school principals to provide adequate staffing to meet the needs of the individual programs.
7. Prepares instructional budgets.

School Leadership. The campus leadership creates an environment which is attractive to students and parents. Various leadership configurations are utilized, but in all, the principal has the ultimate responsibilty of implementing the program based on objectives and estalished policies. The principal has the option to delegate this responsibility to an assistant principal, dean of instruction, program administrator or magnet school coordinator. The position used in the Houston School District is a Magnet School Instructional Coordinator. Illustrative duties of the magnet school coordinator include:

1. Actively recruit students for the magnet school program.
2. Establish and maintain open communication with the community.
3. Exemplify positive interpersonal relations and aid in developing good human relations among teachers/students and between personnel and other personnel in the building.
4. Serve as primary liaison with Transportation Department in matters relating to magnet students.

5. Aid in developing program objectives and organizing a record keeping system to monitor these objectives; participate in on-going evaluation and modification of program as needed.

6. Assist with preparation of budget, financial reports, requisitions for supplies/equipment and inventory of magnet school purchases.

7. Provide assistance in design of inservice for teachers and paraprofessionals and work with individual teachers to improve classroom instruction.

8. Provide assistance in curriculum development and selection of appropriate enrichment materials and activities.

Because of the nature of the duties performed by the magnet school coordinators, districts have been able to identify and train instructional leaders who have moved into administrative roles in magnet and non-magnet schools, thus increasing the effectiveness of instruction across the District.

Management Team and Advisory Committee. Some districts use a management team concept. In the Fort Worth School District a management team serves as an advisory body for policy making. The team reviews and determines the nature, scope, and effectiveness of magnet programs and advises the Director accordingly. The team functions similarly to a site-based management team, offering advice and making policy which give direction to the following:

- Budget planning and implementation
- Facilities and equipment
- Personnel (This is a very sensitive area and the Management Team's role will be limited to the suggestion for personnel needs.)
- Program development
- Program evaluation
- Communication and public relations
- Scholarship opportunities
- Student follow up
- Other (as needs dictate)

Organizational Structures of Magnet Schools

Magnet schools are structured to meet the needs of a school district as well as the needs of a particular campus and/or community. The organizational structure is related directly to the overall instructional and desegregation

goals of a particular magnet school. Since the main thrust of the magnet school approach is to achieve integration through quality education programs, ethnic composition of the school environment is important. The organizational structure enhances the success factor by achieving the most integration possible in a program as well as impacting the total campus at a level necessary to consider integrated. It also influences the ability of a magnet school to attract students. Some organizational structures allow for short term involvement in an integrated environment.

A survey of of the forty-four school districts that received Magnet school grants during 1986-87 school year indicates that the following structures are operational:

(1) School-Within-A-School Program

A School-Within-A-School Program is designed to attract a student body reflecting established racial goals. A specific group of students meets apart from the rest of the student body, although they may join the others for non-academic and academic studies not related to the magnet school's area of specialization. This separation is necessary due to the kinds of programs which are offered such as music or programs for gifted students. The number of students to be served is pre-determined based on space available, racial and ethnic goals. Transfer students leave their home schools to transfer to this magnet school or they participate in their home school's School-Within-A-School.

Careful consideration must be given to the relationship of the School-Within-A-School's students, staff and resources to those on the same campus in the regular school program. Where possible, the program must impact the regular school population in terms of desegregation and improvement in the total instructional program.

The School-Within-A-School structure is widely used in school districts. It allows for the effective utilization of low enrollment schools since a program is usually located in a building with vacant space. It can also have a very positive effect on the total student population as magnet school expectations - academic excellence, school pride, parental involvement, etc. - permeate the entire school.

(2) Add-On-Programs

In some magnet schools, specialty programs are added to the regular school curriculum. In these instances, the student body affected includes the total enrollment of the school. Each school may have a

slightly different format for attaining their educational objectives, but in all instances each school has a magnet program as well as the regular district curriculum. Transfer students are accepted based on identified ethnic goals to impact the integration level on the total campus.

This structure has been particularly effective in some school districts at the elementary level. It allows for maximum utilization of space but its greatest impact comes from the instructional enrichment provided for a total school population.

It is suggested, however, that "add-ons" have two serious disadvantages:

(a) Because the school remains basically racially identifiable, it is difficult to recruit the non-resident race to a school.

(b) Because there is a segregated enclave, intergroup hostility is always a problem. (Rossell, 1985: 7-22)

(3) Separate and Unique Schools

Separate and Unique Schools provide a unique curriculum and single educational focus for all students attending the school. All students transfer into a separate facility, usually a redirected school site or newly constructed building. Students transfer into the program based on the total number to be served and predetermined ethnic goals. This model represents the ideal structure for a magnet school.

Separate and unique schools are called "selective schools." Even though some of these schools are now called magnet schools, the concept of selective schools that rely on voluntary enrollment has been a part of American education since 1635 with the founding of the Boston Latin School. The best known of these schools compose an honor roll of U.S. education: Bronx High School of Science in the Bronx, Lane Tech in Chicago, New York High School of the Performing Arts in Manhattan, and the High School for Health Professions in Houston.

(4) Cluster Centers

Cluster Centers are designed to give students from racially isolated schools the opportunity to spend several days during a school year in an integrated environment. These programs specialize in a given area of educational experiences. Various education media for teaching are used.

The Houston program includes the Outdoor Education Centers, Wildlife Cluster Center, International Trade Center, Career World, and the Children's Literature Center.

Variations in these organizational structures are being implemented in a few school districts. These include:

(1) Neutral Sites

Programs are placed in a separate facility in a central location. The facility may include one Separate and Unique Program or several Schools-Within-A-School. All students transfer into the program or onto this campus. The Downtown Magnet School in Boston is an example of this structure.

(2) Part-Time Programs

Students in these programs attend their home school for the regular curriculum and attend magnet schools only for the specialty classes. Sky Line Magnet School in Dallas is an example of this structure.

It appears that all of the organizational structures have merit as related to program and desegregation goals of school districts. Some analysis of these structures were included in Blanks, et al, 1983. However, further study should be undertaken to answer the following questions:

(1) Which structure is most successful and under what circumstances?

(2) Which structure has the greatest impact on student achievement?

(3) Which structure is the most cost effective?

Program Design

Magnet schools are significantly different from one another as well as from the comprehensive program available in a given school district. The program has a distinctiveness that is best for certain students, just as other options, including the conventional school program, are best for others. The magnet program is based on a distinctive curricula that provide relative equal opportunities for all youth. (Barr, 1982: 37-40)

Unique Themes. The uniqueness of a magnet school is related to the theme which determines the curriculum and/or delivery strategies and/or teaching methods, and grade levels. Themes being implemented vary within school districts but there appears to be district patterns. It is clear that while many of the themes selected relate to interest of the student, others are selected based on career options available for students in a community. The career

options are particularly important at the secondary level.

Unique themes have been determined in many different ways by school districts:

a. Student and/or parent surveys to ascertain interest in a particular theme.

b. Needs Assessments - Questionnaries used to secure responses on areas of immediate concern and to provide an opportunity for open-ended expression concerning needs and/or types of programs.

c. Parent-Teacher-Comunity Task Force

d. Visits to other school districts

e. School Core Committee - made up of principal, the Chairman of the Parent Advisory Committee, a faculty-elected representative, and in the case of a high school, a student leader. Core Committee members meet with groups they represent and also serve on the Area Advisory Committee. Data are used to supplement the recommendations relative to programs and placement.

The magnet themes implemented in school districts may be grouped into categories related to curriculum, delivery strategies and/or philosophy and student needs and/or characteristics. At the elementary level the majority of the themes relate to enrichment of the curriculum with some school districts giving attention to delivery strategies and students needs and/or characteristics. At the secondary level, themes are related to career options and specific student needs, such as banking, finance, aerodynamics, medical careers etc.

A survey of school districts implementing magnet school programs indicate the following categories:

Elementary Magnet School Themes

(1) Themes related to the curriculum:

Communication, Visual and Performing Arts - Music, Art, Dance, Theatre, Photography

Math, Science and Computers - Marine Science, Ecology, and Outdoor Education, Environmental Education, Horticulture, Wildlife Discovery

Academic - Structure of the Intellect, Foreign Languages, Problem Solving

Humanities - Writing, Literature

Multicultural

Business Education

Physical Development

Technology

(2) Themes related to delivery strategies and/or philosophy:

Open Education Concept

Montessori

Continuous Progress

Individualized Instruction

Back to Basics

(3) Themes related to student needs and/or characteristics:

Early childhood

Gifted and Talented

Extended Day

Secondary Magnet School Themes

(1) Themes related to the curriculum and/or career options:

- Math, Science, and Computers and Technology - Biological and Environmental Science, Pre-Engineering, Computer theory, applications and programming, Health and Medical Professions
- Business and Commerce, Finance
- Military (e.g. JROTC)
- Communications, Visual, Creative and Performing Arts - Telecommunications, Graphic Arts
- Academics (in conjunction with a University)
- Foreign Languages
- Liberal Arts - Writing, Global Education, Classical Studies, Teaching Professions, Literature

- Government/Law - Law Enforcement, Criminal Justice
- International Studies

(2) Themes including vocational programs:

Machine Trades

Aerodynamics

Petro Chemical Careers

Banking and Finance

Hospitality Careers

There is some evidence that the selectivity, or perceived selectivity, of magnet schools is more important to many parents than the specific magnet theme. This may be more true, however, when the magnet theme is a teaching style, as in most elementary schools, than when it is more clearly curricular, as in secondary schools. Rossell suggests that magnet schools located in racially isolated minority schools should be nontraditional at the elementary school level and highly academically oriented at the secondary level. The more racially isolated the school, the greater selectivity or perception of selectivity there should be. (Rossell, 1985:7-22)

Blank, et al, 1983, found that the way a magnet program is marketed impacts the student self-selection. Students and parents are drawn to a magnet school or program in response to the way it is presented to them. The theme of the program is the basis of the marketing.

Curriculum and/or Delivery Strategies. Students are offered a challenging and rewarding curriculum that is broad in scope yet unique in the area(s) emphasized. The curriculum brings the theme of the program into focus and includes planned experiences to assist students in attaining desired outcomes. Even though it is significantly different from the regular school curriculum, coordination of the two must occur to assure that magnet school programs reach

the "excellence" that is being sought.

A quality magnet school curriculum should include:

- enriched content in the specialty area beyond the regular prescribed curriculum
- resources beyond those designated for use in the regular classroom
- attention to both the affective and cognitive domains
- appropriate interdisciplinary studies
- attention to higher level thinking skills
- opportunities for special activities such as field trips, internships, informed classroom activities, tutorial sessions, etc.

Curriculum Development. Development of curriculum involves professional educators as well as specified community, corporate, and college and university resources. The theme and program goals serve as the bases for determining the content, learning experiences, method of instruction, and evaluation of the curriculum. As in other instructional programs, the curriculum is usually published as a curriculum guide.

Curriculum developed for magnet schools can lead to the improvement of curriculum in general. This curriculum should be shared with non-magnet schools, thus allowing the regular school students to benefit from same.

A problem of magnet schools is that so many of them created because of court-ordered desegregations, have been developed rapidly with little or no time to train staff, inform parents, and develop appropriate curricula. As a result of this urgency, many "special theme" magnets have simply failed to live up to their promise of unique curricular programs. (Barr, 1982:37-40).

Staffing

A critical component in a successful magnet school program design is a qualified and committed staff.

Staff Selection. Teachers and other staff in magnet school programs are selected according to criteria consistent with the theme and objectives of the program. Flexibility in staffing allows for the utilization of experts in speciality areas which adds to the indepth content exposure provided students.

The following characteristics of staff add to the strength of magnet programs: (1) Interest, (2) Experience and/or training, (3) Commitment, (4) Capacity and willingness to spend extra time with students.

Magnet Schools take advantage of multiple resources to enhance instruction. Part-time and/or hourly specialists, university professors, corporate (employee-all) actually teach in magnet schools. Volunteers further enhance the instructional program.

It is recommended that schools located in racially isolated minority neighborhoods likely to have difficulty attracting Whites should have popular white principals and teachers (but no more of the latter than is necessary to have a racially balanced staff) and schools located in a racially isolated white neighborhoods likely to have difficulty attracting minority students would have popular minority principals and teachers (but again no more of the latter than is necessary to have a racially-balanced staff) (Rossell; 1985:7-22)

Whether recruited through regular district processes or specially devised methods for magnet schools, teachers are sought who have educational or experience background in the specialty area an interest in teaching in a magnet school, an understanding of th cultures of that children, high expectations and a willingness to go that extra mile.

Staffing Ratios. Pupil-teacher ratios, class size and/or pupil professional staff ratios are adjusted downward to serve as incentives to teachers as well as strategy for attracting students. Special ratios are also required in laboratory settings.

The Houston School District found that a lower pupil-teacher ratio was cited as the most or second most attractive feature of magnet parents (Stanley, 198:9, 12). Similarly, parents of children attending a magnet school, formerly with a predominantly black student enrollment, in St. Paul, Minnesota, also indicated the most important factor to be the low pupil-teacher ratio (Levine and Eubanks, 1980:57). Magnet schools should be projected, and widely publicized, to have low pupil-teacher ratios. (Rossell, 1985:7-22).

Pupil professional staff ratios tend to be lower in magnet schools. Professional staff includes principals, teachers, counselors, nurses, resource room teachers, librarians, etc. The professional staff ratio in the Houston Independent School District ranged from 10.1 to 20.8 (1984-1985).

In staffing magnet schools, ethnic diversity must be considered. In some district's ethnic ratios are established by court order. In others, the ratios are set by the Board of Education as a part of the regular district staffing plan.

Staff Development. Staff development is a key component in successful programs. Activities include: (1) training in specialty areas, (2) multicultural activities; (3) teaching strategies, (4) educational philosophy. In Houston staff development and inservice requirements exceeded 68 hours of appropriate training during the initial implementation period.

Teacher training in the Fort Worth magnet school program included:

(1) Courses in Gifted and Talented Education

(2) Outcome Based Instruction Workshop

(3) Mastery Learning Workshops

(4) Effective School Workshops

(5) Individual Learning Style Strategies

(6) International Baccalaureate Training

Staff development and inservice training may be handled internally or externally. School district departments, colleges and universities, community agencies/ institutions have all been used in providing teachers with developmental opportunities.

Magnet schools offer a setting in which teacher-generated reforms can take place. Curriculum development has been a contribution that affects the educational reforms in states and the nation. (Doyle and Levine, 1984:265-70)

Student Selection

Magnet schools programs are created to give students a voluntary choice based on interest and particular needs. Thus, student selection processes must provide access for students on the basis of voluntary preference. Magnet programs should be designed to serve average as well as high-ability students.

Various methods based on the type of program are being used to select students:

(1) Open enrollment based on first-come, first-served

(2) Multiple criteria

(3) Testing (Aptitude and Achievement)

(4) Auditions

(5) Interviews

(6) Lotteries

Elementary programs tend to select students on a first-come first-served admission policy. These programs are designed to enrich the elementary curriculum and to give students an opportunity to explore interest areas. The exceptions to this policy are admission to gifted and talented programs and in some instances math and science programs. For example:

(1) Fort Worth Texas's Morningside Preparatory School of Science and Mathematics requires a student to score at or above the 80th percentile on the math and reading subtests on the Iowa Test of Basic Skills (ITBS).

(2) Houston's Vanguard Program develops a student profile including: performance on a standardized achievement test, academic achievement, and teacher, parent, and student inventories which determine the level of development in characteristics unique to gifted students.

Many secondary programs are more selective. Students begin to concentrate on specific career goals based on identified strengths. For example:

(1) Scores above the 60th percentile on the Differential Aptitude Test (DCAT) were required for admission to secondary programs in the Fort Worth, Texas programs.

(2) Houston's High School for Performing and Visual Arts includes audition and interview as a part of the selection process.

Ethnic balance and/or desegregation goals are required in magnet school programs. This balance and/or goals are established either in a Court Order or by Board Policy. The percentage of each ethnic group included in magnet programs varies from distict to district.

Magnet schools must reflect a policy of inclusion rather than exclusion (Doyle, 1984:265-70). Careful attention must be given to positive racial integration. One of the greatest concerns is that these schools do not reach out to assist the minority and poor youth of America who are the targets of the desegregation movement, but focus instead on attracting and holding middle-class youth. Charles McMillan suggested that: "If magnets are to prove their worth as a desegregation remedy, they must demonstrate first and foremost their ability to educate a minority child and the poor child whose rights have been denied." (Barr, 1982:37-40)

The location of the school and percent of minority students affects the success of the program. Rossell found that schools in black neighborhoods have difficulty in attracting whites, regardless of whether assignment is mandatory or voluntary. Attracting whites depends on past and projected racial composition. She suggests that "schools in black neighborhoods should be projected and widely publicized, to be predominantly white and the more

racially isolated the school, the higher this projected white percentage should be."

The 1983 study of magnet schools (Blank, et al) revealed four types of selectivity practiced among the magnet schools in the study: (1) student self-selection, which is inherent in the magnet concept; (2) market focus, which is expressed in the ways in which magnets are marketed to the community and consumers; (3) applicant screening, which may include both behavioral and academic standards for admission; and (4) post-entry mechanisms for transferring students who do not perform or behave in accordance with the magnet's standards.

Some critics of magnet school programs claim that magnet schools "skim" the best students. Most agree that magnets do, in fact, "skim" to some degree the best students, but there are many positive advantages that impact the quality of education in a community.

Specialized Resources

The success of magnet school programs is enhanced when adequate resources are provided to add the uniqueness desired. Facilities, supplies and materials, equipment, and human resources are the ingredients necessary to create a unique learning experience in an orderly humane environment.

Facilities. Rearrangement and/or construction of facilities relate directly to the program theme and curriculum. For example, a science program, elementary or secondary must include space for actual laboratory experiments. Likewise, a fine arts program must include space for performing, rehearsing, such as soundproof rooms, dance floors, etc. The facility affects the creativity allowed in a unique program.

Equipment, Supplies, and Materials. Since magnet school programs include the basic curriculum plus a unique specialty, consideration must be given to providing opportunities for students to move beyond the basic curriculum.

Equipment, supplies, and materials must provide an opportunity for students to explore, create and utilize higher-level thinking skills. It is in this area that the unique curriculum comes alive.

Human Resources School and community resources with expertise in a particular area allow the necessary enrichment and indepth study in the magnet specialty. Business and industry, colleges and universities and other community resources create a pool of individuals who can teach and challenge students.

Student Recruitment

Student recruitment efforts must be based on effective communications with the total community. If the goal is to make available on a voluntary basis programs to children according to interest and choice, the message must be clearly communicated to students, staff, parents, and the total community.

Basic tools for transmitting the message include: (1) direct community contact by speaking to civic groups, churches, professional groups and employees of institutions; (2) printed materials such as brochures, fliers which may be mailed to individuals; (3) news media to reach specific publics; (4) district activities for parents and students; (5) exhibits and performances; (6) speakers; (7) publications of specific groups, agencies and/or corporations.

A problem in the recruitment of students is that of adequately informing parents and students about the variety of magnet schools and helping them make sound choices among the programs offered. Decisions sometimes appear to be based on superficial information which bears little relationship to actual practices in the magnet schools. (Barr; 1982:37-40)

Transportation

Magnet schools rely on efficient planning and effective delivery systems. Thus transportation is a key component in successful magnet school programs. In providing transportation for all students who live outside the attendance

zone of the school at no cost to the student, consideration must be given to the most efficient and effective method of movement of students. A system must be created to coordinate regular transportation, special education, transportation required under Court ordered desegregation plans, and magnet schools. Magnets should be strategically placed to minimize long distances. (Rossell, 1985:7-22)

Where district transportation service is not available, alternatives should be considered. These include:

(1) Individual contract with the parent on a per diem basis

(2) Private bus companies

(3) Metropolitan bus services

(4) Parent drop off and pick up

(5) Students and parents riding together to central sites utilizing employee van pools.

(6) Limited attendance zones

Attention must also be given to transportation for students who wish to participate in after school activities. In St. Louis, for example, transportation is provided to students who wish to participate in after-school activities.

Funding Magnet School Programs

A major task in developing Magnet School programs is to identify the financial resources necessary to meet the program and desegregation goals. The following funding sources should be considered:

(1) Reallocation of existing state and local funds

(2) Vocational funds

(3) Special state funding

(4) Federal funds

(5) Foundation, Business/Industry funding sources. Corporations may fund programs that are specifically related to their area

of business or service. For example:

Banks are involved in banking, and therefore would be interested in funding for programs related to banks.

Engineering firms would primarily be interested in funding programs relating to engineering.

The available sources are numerous and varied. A study of area corporate directories, however, is a good place to start in looking for possible funding sources. Foundation directories list information concerning funding: (a) Donor(s), (b) Purpose and Activities, (c) Financial data, (d) Officers and Trustees.

Evaluation

The importance of an evaluation component in a magnet school program cannot be underestimated. How do we evaluate? To determine the effectiveness of programs, both process and product evaluations should be undertaken.

Process Evaluation. This type of evaluation is designed to assess the achievement of management timelines and performance of personnel in implementing the program, and detecting, during the ongoing implementation process, the strengths and weaknesses of the overall implementation effort. The process evaluation provides feedback and quality control data for the implementation method and improves the management system. The process evaluation will answer the question: Do the activities, resources used, etc., flow from the stated objectives of the specific program?

Product Evaluation. Product indicators include standardized criterion performance, affective behavior of teachers, student attendance, student and parent input, faculty stability, community input and participation, administrative and teacher input, and racial composition of students.

The evaluation design should be multi-directional and multi-source in nature.

a. Internal Evaluation Report - Each school provides a report.

b. External audit of magnet school programs - External personnel work in consultative and monitoring roles with programs throughout the year. In general, an audit is designed to allow external application of the same objective criteria used in internal evaluations by program personnel. The audit reports the product findings related to the accomplishment of individual magnet school program objectives.

c. Summary review of project - The review includes data related to success in achieving action steps related to desegregation and program objectives.

Evaluations may be completed by internal district sources (Department of Research and Evaluation) and/or outside contracted services, such as colleges and universities, etc.

ANCILLARY COMPONENTS

Other components add to the success of a magnet school. Depending on local circumstances, these may or may not be included: (1) Parental Involvement, (2) Corporate/Community Support, (3) Inter-District Participation, (4) Evaluation.

Parental Involvement

Organized parent involvement in the education of children has been going on for the past 88 years. While parents and teachers have traditionally formed the cornerstone of the partnership, an expanded role for parents has been undertaken. Every effort is made to keep parents informed and actively involved as volunteers. Activities include: (1) Parents Night, (2) Volunteers with instructional and clerical duties, (3) Supervision during field trips, (4) Participants in recruitment of students, (5) Parents calling parents, (6) Financial and In-kind Contributions.

Corporate/Community Support

Community involvement in schools provides a range and depth of experiences for students which can greatly enhance their learning. Magnet schools utilize

resources of major corporations, colleges and universities, and social agencies to provide a richer, more relevant education. Community and corporate involvement extend to program planning and design, instruction, and support.

Business/School Partnership or Adopt A School. The Business/School Partnership pairs magnet schools with one or more businesses. The thrust of the program is the active involvement of businesses in the schools on an ongoing basis. This involvement takes many different forms. The business, for example, gives released time to their employees to tutor students or present mini-courses. It may arrange field trips, provide summer jobs, or donate materials to the schools.

To establish a Business/School partnership, the principal must survey the needs of the school, select a coordinator, encourage school personnel to support the program and participate in selling prospective companies on the business/school partnership. The teacher and the business volunteer work together as a team.

Activities of volunteers from business include (1) tutoring, (2) sponsoring field trips, (3) speaking, (4) teaching computer classes, (5) assisting teachers, (6) planning curriculum, (7) designing special labs.

Mentorships, Internships. Mentorships and internships offer a unique opportunity for students to have meaningful non-school based experiences.

In Rochester, attorneys and support staff at the law firm of Harris, Beach, Wilcox, Rubin, and Levy have formed a partnership with the School of Law and Government. As partners with the school, the law firm staff makes classroom presentations, assists with curriculum review, consults with faculty on law-related topics, and provides role models, internships and coaching for the students.

Rochester's Medical Magnet School has formed a partnership between the

science magnet and the University of Rochester School of Medicine. Seventh, eighth, and ninth graders participate in labs at the School of Medicine on Saturdays and have 20 hours of mentorships with hospital staff.

University/College support. The High School Scholars Program in Houston provides talented science/math students with the opportunity to interact with nationally renowned scientists from Baylor College of Medicine and Rice University. Participation in the program furthers the students' knowledge of the sciences and provides exposure to the scientific research process.

Community Institutions. Fourth graders in HISD's Gifted and Talented Program are involved in an environmental education project at Armand Bayou Nature Center. This project provides an interdisciplinary approach to studying the relationship between humans and the environment.

- The New York High School of the Performing and Visual Arts, for example, is located close to the theater district. Its campus is situated across from Juilliard, the New York Library of Music, and just behind Lincoln Center.
- Houston's School of Engineering Professions reflects the city's stake in high technology.

Inter-District Participation

The Voluntary Interdistrict Plan (VIEP) in the Houston Metropolitan area is a creative approach to encourage inter-district cooperation for sharing educational programs. Through voluntary cooperation between the Texas Education Agency, the Houston Independent School District and the surrounding suburban districts, students are able to choose educational options across district boundaries. Approximately 1200 of the participants in magnet programs are students from surrounding districts.

The St. Louis Voluntary Inter-district Plan encourages black students to transfer from St. Louis to predominantly white St. Louis County Schools and recruits comparable numbers of St. Louis County white students for city schools.

CONCLUSION

Magnet schools appear to have proven their value. At a time when many people believe that little is working well in public education, a concept with even a modest record of success is exciting news. (Barr, 1982:37-40)

A growing body of information attests to the effectiveness of magnet schools:

- Reduction in violence and vandalism
- Better attendance rates
- Improved achievement
- Improved student concept and better attitudes toward school

According to a 1983 United States Department of Education study conducted by James H. Lowry Associates and Abt Associates (Blank, et al):

- Magnet schools can and do provide high quality education in urban school systems.
- They help renew the interest and motivation of teachers, because efforts are organized around common academic goals and interdisciplinary curriculum planning.
- Potentially, they can help improve a school system's image in the community as a result of voluntary enrollment policies.

There have also been unintended consequences of magnet schools: (1) they provide parents a choice within the public school system--the ability to choose the kind and quality of education they want for their children, (2) magnet schools encourage practice of a wide variety of educational philosophies and methods, (3) magnet schools have provided us a means for research and development--for trying our new ideas and approaches that add to our knowledge of effective school programs. (Clinchy, 1985:43)

Several potential research questions have been identified. A search of the literature and information available indicate that there is a need for systematic, comparative analyses of magnet school components related to success. Components have been clearly identified, but questions remain about program components leading to successful magnet schools.

How well do students do after they leave magnet school programs? Very few of the school districts can answer this question based on accumulated longitudinal objective data. Others have not had enough graduates to determine same. Follow-up studies are needed to determine if students are indeed successful and if this success can be related directly to magnet school programs. Further attention should also be given to which components of magnet schools contribute to this success. Further research will give us objective data to assist school districts in moving forward in creating effective schools and achieving the excellence we all want for our schools.

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